Accessible Communication: a systematic review and comparative analysis of official English Easy-to-Understand (E2U) language guidelines

Andreea Deleanu, Constantin Orasan, Sabine Braun

University of Surrey (Guildford, United Kingdom) m.deleanu@surrey.ac.uk, c.orasan@surrey.ac.uk, s.braun@surrey.ac.uk

Abstract

Easy-to-Understand (E2U) language varieties have been recognized by the United Nation's Convention on the Rights of Persons with Disabilities (2006) as a means to guarantee the fundamental right to Accessible Communication. Increased awareness has driven changes in European (European Commission, 2015, 2021; European Parliament, 2016) and International legislation (ODI, 2010), prompting public-sector and other institutions to offer domain-specific content into E2U language to prevent communicative exclusion of those facing cognitive barriers (COGA, 2017; Maaß, 2020; Perego, 2020). However, guidance on what it is that makes language actually 'easier to understand' is still fragmented and vague. For this reason, we carried out a systematic review of official guidelines for English Plain Language and Easy Language to identify the most effective lexical, syntactic and adaptation strategies that can reduce complexity in verbal discourse according to official bodies. This article will present the methods and preliminary results of the guidelines analysis.

Keywords: Accessibility, Easy-to-understand language variety, Accessible Communication, systematic review

1. Introduction

Accessibility as we conceive it today was first mentioned in the Universal Declaration of Human Rights (UDHR, 1948). The definition has since been extended to take people's individual (dis)abilities into account, with the European Standard EN 17161 (2019) defining accessibility as the "extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in identified contexts of use". As context of use also include the interaction between people. Accessible Communication has become a fundamental right in itself (UNCRPD, 2006). Accessible Communication includes "any form of communication that prevents communicative exclusion" (Perego, 2020) so that all users have equal opportunities (UNCRPD, 2006) regardless of their communicative resources, abilities or access to the mode or channel (Maaß, 2020). This entails that when users cannot or cannot completely access information in its original form (Greco, 2016), an alternative should be provided to overcome any potential barrier. Barriers range from sensory to cognitive, from language and culture to expertknowledge, from motoric to individual skills (Maaß, 2020). As far as the cognitive barrier is concerned, it arises when a person cannot make sense of or cannot understand information because complexity. This in turn affects their experience and social and cultural participation. Complexity can be intrinsic, meaning that complex information is inaccessible because of the way it has been developed or presented by content creators. Complexity can also be extrinsic, however, when an individual's diminished cognitive abilities reduce the ease with which information is received, processed, stored, retrieved, and used (COGA, 2017). In order to address the cognitive barrier, Easy-to-Understand language varieties have been proposed as a means to overcome complexity of verbal written communication for a variety of users (UNCRPD, 2006).

Easy-to-understand (E2U) is an umbrella term encompassing a wide range of "functional language varieties of different national languages with reduced linguistic complexity, which aim to improve comprehensibility" (Hansen-Schirra & Maaß, 2020b) in verbal communication. E2U varieties aim at overcoming cognitive, linguistic (for non-native speakers), cultural and expert-knowledge barriers encountered by a wide pool of users, including migrants, functional illiterates, vulnerable age groups (Maaß, 2020) and people with diverse cognitive abilities¹. These language varieties thus differ from standard language as they are user-oriented and their main function is to help understand and use information provided (Hansen-Schirra & Maaß, 2020a). Plain and Easy Language are two of the most used E2U varieties to facilitate access to information. While the use of E2U promises to overcome cognitive barriers and achieve seamless and accessible communication, several issues arise, undermining its success.

Firstly, the UNCRPD (2006) does not (yet) provide practical guidance on E2U principles nor specifies which conditions end-users have, leaving signatories to develop guidelines and best practices at company,

the American Psychiatric Association as 'mental disorders' (APA, 2013). Cognitively diverse audiences can possess varied degrees of cognitive resources in the areas of attention, executive functions, knowledge, language, literacy, memory, perception, behaviour and/or reasoning (Diamond, 2013; COGA, 2017).

¹ We use 'people with diverse cognitive abilities' and 'cognitively diverse individuals' as umbrella terms to identify individuals with temporarily impaired cognitive abilities (due to fatigue, inattention, a learning difficulty, age and/or injury-related cognitive decline) and individuals with permanent impairments. Temporary and permanent impairments include, but are not limited to, the conditions identified by 70

national² or transnational³ level according to their users and target languages. This in turn proves detrimental to the legal implementation of E2U, as lack of consistency weakens its status. Secondly, reception studies with end-users in the field of Accessible Communication are scarce and often rely on individual endeavours. All this results in a lack of an official E2U taxonomy and a growing pool of vague, context-specific or unreliable guidelines being created by academia and the public and private sectors. Needless to say, this means official and nonofficial guidelines proliferate based on intuition or individual expertise of both professional and amateur adaptors rather than based on evidence - albeit with some exceptions (Fajardo, et al., 2014). Adaptors, in turn, find themselves having to pick and choose from several recommendations, often in contrast with each other. What is worse, contrasting guidelines and inconsistent terminology to identify the variety and the user group, have supported the stigma and rejection of Easy Language (Hansen-Schirra & Maaß, 2020b), often considered an impoverished version of standard language (Bredel & Maaß, 2019; Maaß, 2020). Thirdly, Accessible Communication has so far mainly promoted the use of E2U in written domain-specific communication. As far as other formats are concerned, the cognitive barrier is yet to be fully addressed in spoken interactions, audiovisual and multimodal settings (Maaß & Hernández Garrido, 2020; Maaß, 2020; Perego, 2020), with a few exceptions⁴. This further excludes people with diverse cognitive abilities from а truly accessible communicative environment and constitutes a Communication significant gap in Accessible research.

This research is conducted within the framework of a project in Media Accessibility, with a focus on overcoming cognitive barriers in audiovisual formats for English-speaking audiences. The final goal of the was to identify best practice recommendations applicable to audiovisual content, and more specifically, to the adaptation of film narratives for cognitively diverse audiences. This has resulted in the creation of an audiovisual mode called 'Accessible Cues'. The mode relies on text on screen and an integrated additional narrator to explain and clarify complex elements of the film narrative. However, for these explanations to be effective, they need to be understandable, hence the need to use E2U varieties. To achieve this, we carried out a review and classified existing official English E2U guidelines to identify shared recommendations, discrepancies and grey areas. Such a review of existing guidelines and their subsequent analysis has, to our knowledge, never been attempted before. Although the focus is on English guidelines, we believe our approach to be applicable to other languages as well, albeit integrated by language-specific lexical and syntactic

recommendations. As inconsistency and vagueness abound in the analysed guidelines, it was also deemed essential to investigate current practice, to help identify patterns in E2U that could prove effective in reducing verbal complexity and thus enhance comprehension. The findings from the analysis of the guidelines have informed the analysis of two parallel corpora, namely a corpus of standard vs. adapted news articles the Guardian Weekly by (Onestopenglish, 2007) and the standard vs. adapted corpus developed in the in the FIRST project (Orasan, Evans and Mitkov, 2018). We conducted the corpus analysis to identify strategies used by professionals to adapt standard language texts into E2U and to identify further significant E2U strategies applicable to audiovisual formats (forthcoming). In this article, we focus on categorizing, analysing and contrasting E2U guidelines to identify adaptation patterns. This has been pursued by analysing 10 official Plain and Easy Language guidelines which provide guidance on how to create from scratch and/or adapt a standard language text into E2U.

Our contributions can be summarised as follows:

- (1) we conduct a comprehensive alternative classification of 10 official E2U guidelines for the adaptation of English texts and provide an alternative methodology to classify E2U guidelines.
- (2) we additionally conduct a qualitative analysis to identify strategies covered by existing guidelines, including shared, discrepant and incomplete (or "grey areas") recommendations.

Relevant background information will be reviewed in Section 2 by providing a brief overview of the verbal and non-verbal strategies used in *Plain* and *Easy Language*. This will be followed by Section 3 on the guidelines analysis which will focus on presenting the guidelines and methodology used. Section 4 will cover a discussion on the guidelines analysis results. Section 5 will provide conclusions and an overview on future work. Section 6 will conclude with a brief discussion on limitations.

2. Background information

2.1 Plain and Easy Language

Several E2U language varieties have been developed throughout the years to address text complexity. Among these, *Plain Language* (PL) and *Easy Language* (EL) are the most widely used and known varieties. PL is primarily used to facilitate expert-lay communication by empowering lay-users to make informed decisions about health, legal actions, rights and finances (Matveeva, et al., 2018; Hansen-Schirra & Maaß, 2020b). Its primary users include lay-recipients and functional illiterates who struggle with the expert-knowledge barrier posed by public

71 audiovisual access services.

² See <u>UNE 153101:2018 EX, Accessibility Standard on</u> *Easy Language* (here called *easy to read*).

³ See Lindholm & Vanhatalo, 2021 for a discussion on the application of E2U language varieties across the EU.

⁴ See the EU project <u>SELSI</u> (Spoken Easy Language for Social Inclusion) on spoken Easy Language. See the EU project <u>EASIT</u> (Easy Access for Social Inclusion Training) on training materials for the adaptation of existing

administration, legal or governmental documents and rhetoric (Perego, 2020). There are also secondary users who have benefitted from PL, such as vulnerable age groups (IFLA, 2010; García Muñoz, 2012; Matveeva, et al., 2018; Bernabé Caro, 2020, Perego, 2020; PLAIN, 2011a); migrants (McGee, 2010; PLAIN, 2011a), people with reading difficulties (Maaß & Hernández Garrido, 2020) and people with disabilities who do not have access to EL texts (Maaß, 2020). While PL has been dominating the scene for the past 50 years (Mazur, 2000), EL has just started gaining momentum, driven by increased awareness of the importance of Accessible Communication (ODI, 2010; European Commission, 2015, 2021; European Parliament, 2016). EL is also known as Easy-to-Read (E2R; EtR), Easy Reading (ER) or Easy English (EE) (Maaß, 2020; Perego, 2020; Scope Australia, 2015; García Muñoz, 2012), further creating conceptual chaos, as previously discussed in the introduction. Although initially designed to meet the needs of people with learning difficulties (Hansen-Schirra, et al., 2020) with a focus on legibility⁵ (IFLA, 2010), EL has become a means of inclusion for a wide pool of cognitively diverse users⁶. Primary users of EL also include sign-language users (Maaß, 2020), prelingually deaf (IFLA, 2010; Maaß, 2020) and deafblind people (IFLA, 2020; Rink, 2019). Secondary users belong to different age groups and rely on EL in expert-lay communication contexts, as it is the case for non-experts (Maaß & Hernández Garrido, 2020); non-native language speakers (Maaß, Saggion, et al., 2011); people with limited education and functional illiterates (IFLA, 2010; Maaß, 2020), especially when no PL version is available. Both language varieties rely on verbal strategies to make language more accessible and on non-verbal strategies to make meaning easier to retrieve and perceive (Perego, 2020).

2.2 Verbal and non-verbal E2U strategies

The adaptation or creation from scratch of E2U material is achieved through verbal and non-verbal strategies. These are applied according to the expected knowledge of target users, their literacy level, communication needs, the text type and text function (Bernabé Caro, 2020; Perego, 2020). Comprehension is improved at verbal level by manipulating language. Non-verbal manipulate the overall text instead, by relying on visual aids (e.g., images, pictures, pictograms, ideograms, symbols and icons) to help users visualize and co-reference information (Tuset et al. 2011), and on textual and layout techniques (e.g., tables, headings, bullet points and lists) to provide more organized. and therefore linkable and information. Strategies used to manipulate information rely on two adaptation strategies, namely simplification and easification. This article will only discuss non-verbal strategies that directly affect language rather than strategies concerning legibility, page design and visual aids.

Simplification can be defined as "the process of transforming a text into an equivalent which is more understandable" (Saggion, et al., 2011). It does so by reducing linguistic complexity (WCAG 2.1, 2019) and it consists in the adaptation of the form and content of a text "to produce either a 'simplified version' or a 'simple account' of the original text" (Bhatia, 1983) to facilitate comprehension without distorting meaning. Input is here manipulated by resorting to lexical and syntactic transformations at sentence, paragraph and overall text level.

Easification, on the other hand, makes text more accessible not by adapting its content but by developing in the reader specific learning strategies. (Bhatia, 1983). This includes guiding readers, raising awareness of potential ambiguities and difficulties (van den Bos, et al., 2007), introducing the topic by giving an overview of it, highlighting causal links and relations, supporting an argument with evidence, examples and references through visual aids (e.g., boxes, images, flow charts, diagrams, etc.) and restructuring, reorganising or rearranging information in the text (Bernabé Caro, 2020).

Regardless of their benefits, both simplification and easification have their limitations. In fact, both methods are based on assumptions (albeit expertisebased) made by the adapter and elaborations and changes may not fully transfer original meaning, maintain grammatical correctness, nor help readers develop their own coping strategies (Saggion, 2018; Fajardo, et al., 2014). Co-creation and validation with end-users would therefore be preferable. However, this is often not feasable due to economic and time constraints. A possible solution could be identifying patters in E2U adaptation by exploring official recommendations and/or practice. This would then provide a more holistic approach to E2U adaptation.

3. Guidelines analysis

The cognitive barrier is yet to be addressed beyond written verbal communication. As a point in case, guidance on Easy-to-Understand (E2U) practice in multimodal settings, and more specifically, in the audiovisual realm, is scarce and, to date, no solution has been proposed to improve access to film narrative. For this reason, we conducted a guidelines and corpus analysis (forthcoming) to extract recommendations relevant for the development of a mode that can improve access to and enjoyment of film narratives, i.e., 'Accessible Cues'. This was pursued by first exploring and comparing several official Plain and Easy Language guidelines designed for domain-specific written communication, as no guidance has been provided yet for other formats.

⁵ Legibility is the interaction between the reader and language-independent elements which both impact comprehension and limit expression. When accounting for legibility, the level of visual and cognitive stress encountered by readers is lowered by making information 72

perceivable, distinguishable and adaptable, thus facilitating readability (Bernabé Caro & Orero, 2019; Bernabé Caro, 2020; Bernabé Caro & Cavallo, 2021).

⁶ See footnote 1 for a definition.

These guidelines were catalogued, classified, compared and analysed to extract meaningful recommendations applicable to multimodal communication at content, lexical and syntactic level.

3.1 Resources

Ten guidelines were taken into consideration for this study⁷. They range from government-led initiatives to promote Plain Language (PL), to charity-led guidelines for the application of Easy Language (EL). These were selected based on a series of criteria, such as the fact that they were freely available online; recent (i.e., published after the 90s) and developed in the United Kingdom, United States and Australia by official bodies. These include governments, national, transnational or European Union user associations and charities. Guidelines focusing on EL have referred to this variety under different labels i.e., easy words and pictures, easy read, simple words and pictures, Aphasia Friendly and even plain language. To overcome this incoherence, we decided to use the umbrella term 'Easy Language' in this analysis to distinguish this language variety from PL. An overview of the guidelines can be found in Table 1.

| Guidelines | Variety | Author | Year | Pages |
|---|---------|--|-------|----------------------------------|
| Am I making myself clear? Guidelines for accessible writing | PL | Mencap (UK association) | 2000 | 31p. |
| Toolkit for Making Written Material Clear and Effective (11 parts) | PL | McGee Consulting (for the US Department of Health and Human Services) | 2010 | Part 3: 24p. part 4: 96p. |
| Federal Plain Language Guidelines | PL | Plain Language Action and Information Network (PLAIN, i.e., US) | 2011a | 118p. |
| Government Digital Service style guide and guidance on content design | PL | Government Digital Service (GDS, i.e., for UK Government online services) | 2022 | 21p. |
| Make it Simple | EL | International League of Societies for the Mentally Handi- capped (ILSMH, i.e., for the EU) | 1998 | 21p. |
| Information for All | EL | Inclusion Europe (for the EU) | 2010 | 40p. |
| Guidelines for easy-to-read materials | EL | International Federation of Library Associations and Institutions (IFLA, i.e., UK) | 2010 | 31p. |
| Making written information easier to understand for people with learning disabilities | EL | Office for disability issues (ODI) and advocacy group Value People (for UK government) | 2010 | 40p. Additional resources: 25p. |
| Clear Written Communications | EL | Scope (Australian charity) | 2015 | 23p. |
| How to make information accessible | EL | Change (UK charity) | 2016 | 25p. |

Table 1: Overview of analysed official guidelines

3.2 Methodology

The guidelines and their additional documentation were manually analysed by the first author based on existing E2U theory (Maaß, 2020; Perego, 2020) and the guidelines' own principles, i.e., their inherent characteristics and their declared premises, intent

and recommendations. Following this review, we created a list of draft categories for each individual set of guidelines. These draft categories were later contrasted to identify macro and micro categories. Four macro categories were identified in order to classify the guidelines, based on their individual characteristics and the recommendations they provided. The ten guidelines were therefore classified and analysed according to the following macro categories: main characteristics, recommendations for practice, guidance on alternative formats and nonverbal aids. An overview of each category is presented in Figure 1.

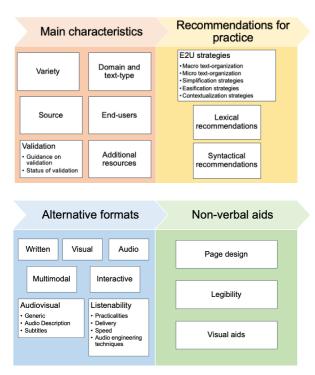


Figure 1: Framework used to categorize and analyse the guidelines

Main characteristics revolve around features such as the E2U language variety they discuss, sources used by guideline developers (e.g., other publications and guidelines, in-house or personal experience, common sense, empirical research with users with and without disabilities), intended domain and text type (e.g., medical, legal, written brochures, contracts, etc.,), expected end-users, validation (whether and how the guidelines have been checked with end-users) and additional resources provided (e.g., visual aids, samples, glossaries, checklists, lists of terms⁸, external links, legal information, research results, etc.,).

Recommendations for **practice** were assigned to different categories to efficiently compare guidelines developed by different entities for heterogeneous end-users and domains. Individual categories were developed by color-coding similar recommendations across guidelines and establishing a hierarchy.

⁷ The guidelines analysis data set can be accessed at https://bit.ly/m/Accessble-Cues

⁸ For example, PLAIN (2011a) provides a list of over 200 73 words to be avoided. See PLAIN (2011b).

Categories identified are E2U strategies, lexical and syntactic recommendations. E2U strategies encompass information on macro and micro textorganization (e.g., style, purpose, appropriateness. accuracy, credibility, relevance of information, order, bullet points, linking words simplification (i.e., elimination, reiteration and of information) and explanation easification strategies (e.g., introductions, summaries, visual aids, quiz formats etc.,), and lastly, contextualization strategies (i.e., at generic, narrative, spatial, temporal, and inferential terminological level). recommendations can be simultaneously ascribed to different categories, e.g., simplification and syntactic categories. These special recommendations have been first assigned to their generic 'E2U strategies' category, and, if additional information is provided, expanded in the lexical or syntactic categories accordingly.

Recommendations on non-verbal aids applicable to written content only will not be discussed in this article due to space restrictions. Yet, these make up a major component of the guidelines and cover suggestions on how to improve perceptibility at page design (e.g., paper, colour and printing recommendations) and legibility9 level (i.e., font-size, font-type, layout). The use of visual aids is also recommended, to help facilitate visualization and co-reference of information (Tuset et al. 2011). Alternative formats will also not be discussed for the same reasons. However, these include recommendations on the use of creative visual and audio formats and the preference for multimodal and interactive interfaces to traditional written material, in opposition to actual practice. Audiovisual formats are also suggested, recommendations provided, although brief and scarce, for Audio Description and subtitles. Generic recommendations on listenability, i.e., the ease with which information is perceived and understood (Perego & Blaž, 2018-2021) are also provided, stressing the need for more attention to audio and audiovisual formats. While all the analysed guidelines emphasise the importance of alternative formats, with audio and video at the fore, none provide explicit information. This could be due to the lack of expertise of guidelines issuers and multimodal versions proving more costly and time consuming, further highlighting the gap between theory, practice and users' best interests.

4. Discussion

We have briefly introduced the framework used to categorize official guideline recommendations for Easy-to-Understand language (E2U) in Section 3. In this section, we will briefly discuss the analysis outcomes of the following categories: main characteristics, E2U strategies, lexical and syntactic

recommendations (see Figure 1). Due to space restrictions, we have removed extensive examples and definitions for each of the discussed categories. However, relevant above-mentioned elements can be found in appendix. The section will conclude with a brief overview of which categories have been successfully and unsuccessfully addressed, in our opinion, to highlight those key areas which could benefit from future research.

4.1 Main characteristics

The first step in the analysis has been to identify the main characteristics of the analysed guidelines¹⁰. As far as domain and text-type are concerned, guidelines have been designed for healthcare, administration or government-related instructions, factsheets and newsletters, but also for non-traditional E2U communication means such as questionnaires and forms, fictional and non-fictional literature, news and commercial websites. While most guidelines focus on the provision of factual domain specific E2U information, suggestions have also been theorized to be applicable to fictional content as part of an enriching cultural community experience (IFLA, 2010; Scope, 2015) suggesting that there can be more to *Easy Language* than just provision of clear facts.

All guidelines claim to be based on in-house practice and expertise or research into reading behaviour and E2U reception studies. The extent of the validation and the way reception studies have been conducted were however not mentioned in any of the guidelines or the documentation they provided, suggesting that there might be no sound empirical basis.

4.2 E2U strategies

Macro strategies¹¹ suggested by guidelines revolve around how and what information should be provided. These range from using a conversational style and everyday spoken language to avoiding slangs, regional dialects and inappropriate language. As far as grammar is concerned, publications suggest abiding by grammatical rules and correct spelling (GDS, 2022; Scope, 2015) while ODI (2010) suggests traditional grammar does not apply and natural spoken language should be favoured instead in both written and oral communication, as the latter tends to occur in more informal and less rule-based environments. This could mean, for example, using Saxon Genitive¹² but not, surprisingly, using contractions for verbs, although this forms part of spoken everyday language.

Most guidelines stress the importance of age and culturally appropriate language, thus suggesting that content producers need to thoroughly know their audience (Mencap, 2000) to address their specific needs (McGee, 2010). This could mean explicitly saying who the material is for, what its purpose is, who

⁹ See footnote 5 for a definition.

¹⁰ See Table A in appendix.

¹¹ See Table B in appendix. Ticks represent elements the guidelines approve of, while crosses those which they reject. Blank rows indicate that no information has been provided.

¹² Singular and plural possessives associated with apostrophe to indicate possession. For example, *the boy's toy* to indicate the toy of the boy or *boys' toys* to indicate a range of toys designed for boys.

the people involved are and who to contact in case of need (PLAIN, 2011a).

Micro strategies encompassing text-organisation suggest grouping information on the same topic together, organizing information in a logical sequence and presenting exceptions and conditions after the main idea, unless brief. All of the analysed guidelines suggest that the **inverted pyramid approach**, i.e., organizing information from most important to secondary, is also the best way of facilitating retention of information. Additional recommendations regard the use of headings, content lists and bullet points to organize the structure of the text to increase its usability. Guidelines also suggest using topic sentences to introduce paragraphs or sections to help readers better navigate the document.

An interesting section regards linking words, with Plain Language guidelines providing a list of preferable words to be used to ensure coherence and to highlight pragmatic relations between paragraphs, sentences and words (McGee, 2010; PLAIN, 2011a). Linking words have been divided into pointing words, echo links and connectives to clearly state whether information is expanded, contrasted or changed¹³. Preferable connectives overlap between both publications, with PLAIN also providing a list of words and connectives to be avoided (PLAIN, 2011b). Although all Easy Language guidelines recommend presenting information in a chronological order using a clear logical structure, none mention coherence, cohesion or connectives to be used. This could be due to all Easy Language guidelines advising the use of short simple sentences and avoiding complex structures, i.e., connectives between words.

The next step has been identifying and categorizing easification and simplification strategies shared by the selected guidelines. An overview of their distribution is presented in Table 2. Ticks are used to identify strategies the guidelines approve of, while crosses identify those which the guidelines reject. Blank rows indicate that no information has been provided.

| Source | Eliminate | Reiterate | Exemplify | Explain | Summarize | Introduce |
|------------------|-----------|-----------|-----------|----------|-----------|-----------|
| Mencap (2000) | √ | | | √ | | |
| McGee (2010) | √ | √ | √ | √ | | |
| PLAIN (2011a) | V | √ | V | √ | | |
| GDS (2022) | | Х | V | √ | √ | V |
| ILSMH (1998) | V | √ | 1 | √ | √ | Х |

¹³ See Table C in appendix.

¹⁴ For example: "You could donate **clothes** you no longer need to a charity shop. The **garments** you donate should be in good condition. The charity shop will not be able to sell **attire** that is badly worn" becomes "You could donate **clothes** you no longer need to a charity shop. The **clothes** you donate should be in good condition. The charity shop will not be able to sell **clothes** that are badly worn" (Change, 2016).

| Inclusion Europe (2010) | V | V | V | V | | |
|-------------------------------|---|----------|----------|----------|---|---|
| IFLA (2010) | √ | | | √ | | |
| ODI (2010) | √ | √ | | √ | √ | |
| Scope (2015) | √ | √ | √ | | | √ |
| Change (2016) | √ | √ | √ | √ | √ | |

Table 2: Overview of easification and simplification strategies in the analysed guidelines

Elimination consists in removing confusing and unnecessary content, introductions and comments, redundant words, fillers, prepositions and excess modifiers. Reiteration consists in repeating keywords and new concepts, their explanation and using consistent terminology to identify the same concept or important information throughout the text with next to no synonymity¹⁴. Reiteration is also applied at syntactic level, with a consistent use of structures to introduce semantically similar concepts introducing sentences on the same topic with the same set of words (ODI, 2010). Exemplification is characterized by step-by-step instructions and use of familiar analogies introduced by cues such as for example, such as, like and including to help readers relate. Explanations rely on the use of definitions within the text introduced by meaning that, that is, that means, analogies, comparisons, images, illustrated word banks or other easification tools such as boxes. Explanations also rely on paraphrase of codespecific terms, easification devices such as glossaries at the beginning or end of the document and context clues¹⁵ for code-specific language to support or improve reading comprehension. An example of definition and reiteration is provided in Figure A in appendix. As far as easification devices concerned. these include summaries¹⁶. are introductions¹⁷, visual aids in the form of illustrations, symbols, diagrams, tables and graphs, captions (McGee, 2010), story and fact boxes (ILSMH, 1998; Mencap, 2000; Inclusion Europe, 2010; ODI, 2010; Scope, 2015), quiz and question formats (McGee, 2010) and even workbooks (ODI, 2010); as shown in Figure B in appendix.

All these easification and simplification strategies are to be used to provide context, explain complex relations (IFLA, 2010) or instructions (PLAIN, 2011a), spell out implications (McGee, 2010) and explain new or difficult concepts and terms as they are being used (Change, 2016) or shortly after (ODI, 2010). Overall, guidelines consistently suggest the use of elimination

75 can be found.

_

¹⁵ These are definition, synonym, antonym (Gibbs, 2020), syntactic (Robinson, 1975) and semantic clues (Kusumarasdyati, 2001). They help readers understand unfamiliar words (Reed, et al., 2017; Nash & Snowling, 2006), draw inferences and develop expectations (Kusumarasdyati, 2001).

¹⁶ Summaries describe what the content is about.

¹⁷ Introductions are informative guided sections that present the topic, how to navigate the document and tell where resources, references and other versions of the document

to condense information, with explanations, examples and repetitions as additional strategies text producers can rely on to explicitate or clarify information. Easification devices are also mentioned as essential, as they help condense information and therefore reduce the size of the written document while also supporting comprehension.

Contextualization strategies include presenting the context or field of application and contextualizing information or narrative according to readers' abilities or expected world knowledge by presenting events spatially and temporally, clarifying inferences, using terminology in context or adding context to help retrieve knowledge or improve literacy. An overview of these strategies can be found in Table D in appendix.

Inferences have been found to pose a major difficulty in communicative exchanges, nevertheless, only some guidelines have confirmed the need to fill in coherence gaps (Bernabé Caro & Orero, 2021). This could be achieved by clearly stating the purpose of the document, assuming lack of background knowledge, or presenting key information only (McGee, 2010; Inclusion Europe, 2010; IFLA, 2010; PLAIN, 2011a). Additional suggestions regard spelling out implications as this helps readers identify personal implications, i.e., if the information provided is applicable to them and how it can be used (McGee, 2010: 56)18. However, only one example has been given, which does not help understand the extent to which implications need to be spelled out, suggesting that content creators are in charge of deciding how much is too much or not enough depending on their audience (Mencap, 2000).

The use of **terminology in context** implies the use of specific terms rather than the preference for short hypernyms, as these might only confuse readers about the field of application of the information, with only GDS (2022) stressing the importance of choosing specific words over short high-frequency words that could potentially be polysemic and therefore more ambiguous than low-frequency or technical terms, in contrast with traditional readability indices (for a discussion, see Fajardo, et al., 2014; Crowley, et al., 2008).

Providing **additional context** can help retrieve knowledge as it is the case for glosses (Inclusion Europe, 2010)¹⁹, in line with suggestions by McGee (2010), claiming context needs to be given first,

followed by new information, definitions explanations. As far as the contextualization of narrative is concerned, this mainly revolves around the length and type of information to be provided, with a focus on the functional and informative dimension of the text. This is achieved by avoiding lengthy descriptions that have a more aesthetic purpose, removing details audiences cannot relate to and removing elements that are not relevant for the comprehension of the plot and whose presence can prove confusing, overloading or misleading. For mean reducing example, this could descriptions, irrelevant characters or digressions but also contextualizing relevant elements based on the expected world knowledge and frames of reference possessed by audiences, to help them relate to an event²⁰ or story (IFLA, 2010)²¹. On the other hand, this does not mean that the language to be used in the adapted narrative should not be creative (Change, 2016) or that original E2U fiction should not be engaging and entertaining (IFLA, 2010). This once more highlights the creative freedom given to adaptors and, consequently, one of the reasons behind inconsistency in daily practice.

4.3 Lexical recommendations

Lexical recommendations are largely consistent across guidelines²². These include the suggestion to use clear familiar words and spoken everyday language characterized by high-frequency choices. Examples of high-frequency choices are 'not needed' for 'superfluous', 'tiring' for 'strenuous' and 'shared' for 'collaborative (Change, 2016). Yet, the extent to which high-frequency words are easier to understand has been criticised by GDS (2022) as high-frequency words tend to be polysemic and therefore the drawing of inferences can prove difficult due to the impossibility of disambiguating meaning. Additional suggestions are using conversational pronouns (you, your, we, our) to address the readers and clearly stating who "you" and "we" refer to. Other suggestions are the avoidance of abbreviations, acronyms, foreign words - unless in use or explained - and a ban on slang and regional words. An example of domestication can be found in the adapted text in Table E in appendix, where the French *Monsieur* is replaced by the familiar yet abbreviated 'Mr.'. Recommendations also range from a ban on special characters to hyphens and large numbers in favour of digits, analogies, or euphemisms (few, many, long time ago). All guidelines stress the need for short words and sentences and some even provide some

¹⁸ See Figure C in appendix.

¹⁹ Only the following example has been provided: "Peter Smith spoke at the meeting" becomes "Peter Smith **is the president of a self-advocacy group**. Peter Smith spoke at the meeting". Peter's name has been associated with his profession, i.e., the gloss (Inclusion Europe, 2010).

²⁰ For example: "Your general practitioner might refer you to the hospital to have an **x-ray of your chest taken**" becomes "Your doctor might ask you to go to the hospital. At the hospital someone will take an x-ray of your chest. **An x-ray is like a photograph.** It allows the doctor to see

inside your body" Change (2016). In this case, readers are encouraged to relate medical procedures to their daily lives. ²¹ See the adapted version of *The Count of Monte Cristo* (Dumas, 1997) by IFLA (2010) in Table E in appendix. In the adapted version, setting descriptions have been kept to a bare minimum, with a focus on actions and dialogues. Moreover, mentioned characters have been narrowed down to main ones.

²² See Tables F, G and H in appendix for a sample of lexical recommendations. Ticks represent elements the guidelines approve of, while crosses those which they reject. Blank 76 rows indicate that no information has been provided.

practical guidance in terms of maximum length. Unfortunately, the extent to which these suggestions are empirically valid has not been discussed in any of the above-mentioned guidelines. All guidelines stress the importance of using an active voice while the few recommendations given on adjectives, adverbs and compound nouns have been extracted from the examples and samples provided by guidelines themselves, rather than from prescriptive instructions. Based on IFLA's (2010) literary adaptation in table E in appendix, it can be hypothesized that adverbs of manner should be avoided while adjectives should be explicitated, removed or replaced with higherfrequency alternatives when of low-frequency. The example provided is "He was a young man of between eighteen and twenty, tall, slim, with fine dark eyes and **ebony-black** hair. His whole **demeanour** possessed the **calm** and **resolve** peculiar to men who have been accustomed from childhood to wrestle with danger" becoming "He was at most twenty years old. He was tall and slim, he had beautiful dark eyes and his hair was black. He looked strong and steady". In this example, the age number has not been transformed into digits, contrarily to most guidelines recommendations. Moreover, as shown by the words in bold, inferences to be drawn from the description of his personality have been explicitated, compound adjectives have been replaced by one-word synonyms and more familiar terms have been used.

A small number of ambiguous and inconsistent recommendations have been found, due to vague language being used to describe rules. As far as ambiguity is concerned, all guidelines insist on the use of concrete words against abstract words or abstractions. What this entails is however not specified as it seems to mean that abstract concepts such as love, ethics, justice etc., should not be mentioned in the guidelines themselves. This is however not the case, as Change (2016) suggests that texts about ideas, concepts and abstract themes (e.g., national identity, spirituality etc.,) can be translated through a more imaginative and creative use of pictures, thus relying on the visual channel to support meaning-making.

Vagueness regards the motto "avoid difficult words". All guidelines mentioned have yet to explain or quantify what makes a word difficult. Suggestions to answer this question range from circumlocutions, technical words and jargon, words ending in -ion. tion, -sion, -ance and -ment (GDS, 2022) and nominalized verbs to be replaced with more familiar words or explanations, context-cues or even glossaries. Additional difficulties are posted by noun strings²³ and descriptive words that need to be replaced with prepositions and articles that clarify the relation between words²⁴. The extent to which these suggestions have undergone a reception study with end-users is however unclear.

While all guidelines concur on the ban on metaphoric and figurative language, two guidelines suggest that figures of speech and metaphors could be used if familiar and that symbolic language could be preserved in creative texts (ILSMH, 1998; IFLA, 2010). ODI (2010) also indicates that humour and jokes can be acceptable in its updated Accessible Communication Formats (Disability Unit & Cabinet Office, 2021) suggesting that a more informal approach might suit target audiences better, once more indicating that no consensus on user preferences has been found.

Traditional readability studies have suggested that a higher number of references, among which pronouns can be found, improves cohesion and thus supports text comprehension (Kintsch & Van Dijk, 1978; McNamara, et al., 2010). On the other hand, research has also found that ambiguous or inconsistent pronouns affect comprehension (Tavares, et al., 2015), that the number of referents negatively impacts on literal comprehension (Fajardo, et al., 2014), that low-skilled readers struggle with drawing inferences about pronominal antecedents (Oakhill & Yuill, 1986) and that the redundancy of references in simplified texts make the grammar more complex and unnatural (Meisel, 1980). Nevertheless, the use of pronouns is scarcely mentioned in the guidelines, suggesting that no consensus has been found in this case either. While some publications insist on the use of proper nouns (McGee, 2010; Scope, 2015), others suggest the use of pronouns only when they clearly refer to specific objects or people (Inclusion Europe, 2010; PLAIN, 2011a). Additionally, while some insist on the use of consistent, repetitive and reduced semantic nuance of words and phrases (Mencap, 2000; ODI, 2010; PLAIN, 2011a; Scope, 2015), others suggest in their examples, that when referencing a concept, personal pronouns, proper names or circumlocutions can all be used (Change, 2016). No consensus has been reached regarding the use of contractions, negations, modal verbs or tenses to be avoided, with Inclusion Europe (2010) using past tense and negations to write the guidelines and provide examples, while, at the same time, rejecting both in its recommendations, as shown in Table I in appendix.

Syntactic recommendations 4.4

Syntactic recommendations are also largely consistent across guidelines²⁵. Recommendations range from presenting one idea per sentence to a ban on word splitting. They also include practical recommendations on sentence length and word

²³ These occur when three or more nouns follow in succession. For example, *Underground mine worker safety* protection procedures development is a noun string, as all nouns preceding 'development' act as its adjectives (PLAIN, 2011a).

example National Highway Traffic Safety Administration's automobile seat belt interlock rule, should 77

be explicitated into The National Highway Traffic Safety Administration's interlock rule applies to automotive seat belts (PLAIN, 2011a).

²⁵ See Table J in appendix.

order, with a preference for Subject-Verb-Object (SVO) simple sentences²⁶ and marked order being used to emphasize words. All guidelines recommend avoiding complex sentences, nevertheless examples and guidance prove insufficient, as no definition of 'complex' is given and examples mainly consist in adapted sentences taken out of context, with no stepby-step instructions. Additionally, guidelines insist on banning subordinates, regardless of this potentially disrupting meaning, as relations between sentences cannot be solely expressed by coordination. One inconsistency is provided in IFLA (2010), where original subordinates are replaced by relative clauses and coordinates in the adapted example²⁷, de facto increasing grammatical intricacy and thus text complexity (Halliday, 2008; To, 2017). This suggests that no agreement has been reached regarding the use of dependent clauses, regardless of them being banned in guidelines. Suggestions shared by all guidelines amount to avoiding subordinate clauses in general and exceptions and clauses indicating uncertain future²⁸ in particular; using simple sentences and resorting to or, but, and, commas and full stop to connect sentences. Nevertheless, McGee (2010) and PLAIN (2011a) have put forward a list of subordinate connectives²⁹ to support cohesion and coherence, suggesting that simple sentences or coordinates might not be enough to express pragmatic meaning.

4.5 "Grey areas"

As far as the main characteristics are concerned, future guidelines developed by official bodies should provide more explicit reference to how they were compiled, by whom and for what purpose, while also providing more extensive details on how the guidelines were validated or whether any end-users were consulted. This could help harmonize practice across official bodies and adaptors. Nevertheless, guidelines have been successfully explicit in their description of end-users, domain, text-types and additional resources adaptors can access. Macro and micro strategies have also been successfully addressed, with linking words being a major point of contention between guidelines. This inconsistency could be addressed by appraising end-users' comprehension and expectations in a reception study. The same is applicable to their ability to cope with and understand abstract concepts, figurative and metaphoric language. Difficult words should also be further defined to provide practical guidance, i.e., tools, that can help adaptors identify and evaluate them. Other lexical recommendation areas that could benefit from end-users' feedback involve references and pronouns, contractions (Saxon genitive and verbrelated), negations, modal verbs and tenses. As far as other E2U strategies concerned. are

recommendations on contextualization have been explicit, although validation with sample populations would be preferable. Simplification and easification strategies have also been successfully addressed, although terminology and text organization of guidelines themselves could be streamlined. The systematic review could also benefit from additional official guidelines being categorized and an analysis of professional E2U practice, as this could shed light on the above-mentioned "grey areas" that have not been successfully addressed by the 10 guidelines we have analysed for this project.

5. Conclusions

The guidelines analysis has shown that different approaches to E2U communication can be taken for different users, depending to the content-creator's experience, purpose and preferences. As a result, no universal set of rules has been or can be identified. Although the analysis highlights inconsistencies and ambiguities of current approaches to E2U, it has also helped identify strategies that are shared across official guidelines. In addition, while the analysed guidelines tend to focus on informative text such as news, public information or domain-specific health or legal information, they mention various formats for achieving E2U, including stories to inform and entertain end-users (IFLA, 2010; Inclusion Europe, 2010; McGee, 2010; ODI, 2010; Scope, 2015. Audiovisual media content such as films and TV programs, has been identified as a further crucial area for Accessible Communication to thrive, beyond the realm of domain-specific interactions (IFLA, 2010; ODI, 2010; Inclusion Europe, 2010). As this research is conducted in the context of a project in Media Accessibility, we intend to address the gap in Accessible Communication by applying the best identified E2U strategies to an audiovisual format. However, identifying these strategies requires addressing grey areas left unresolved by our guidelines analysis (such as the preference for highfrequency but ambiguous and polysemic words over context-specific technical terms) and determining how to deal with conflicting guideline recommendations (such as the ban on abstract concepts). To achieve this goal, we conducted a corpus analysis to identify expected and unexpected language-dependent phenomena that characterize professionally adapted texts (forthcoming). The analysis subsequent comparison with the guidelines results will help us determine which adaptation strategies we should pursue in order to reduce the verbal complexity of the 'Accessible Cues' that we intend to develop to address cognitive barriers posed by film narratives.

²⁶ For example: "After attending the function, everyone will reconvene at the hotel" becomes "You will meet the group. You will have dinner. You will go back to the hotel" (Scope, 2015). The example also highlights the use of syntactic structure reiteration strategies (simplification strategy).

²⁷ For example: "Beside the pilot, **who** was to guide the ship into the harbour, stood a young sailor, **leaning** against the railing" and "The young man stood and watched a small rowing boat **which** was hurrying towards the Pharaon".

²⁸ Constructed with *might happen* or *should do* (ILSMH, 1998; PLAIN, 2011a).

^{78 &}lt;sup>29</sup> See Table C in appendix.

6. Limitations

We acknowledge that our framework, developed through a qualitative guidelines analysis is, to some extent, subjective and tailored to a project in Media Accessibility. The analysis was conducted using a limited sample of guidelines, as our focus was on guidelines issued by official bodies. Moreover, the selected guidelines originate from English-speaking countries, although their distribution is not uniform, as 5 guidelines were developed by British bodies, 2 by American officials, 1 by an Australian charity, and 2 by the European Union. This variation could affect the lexical and syntactic recommendations provided, considering the differences in English language usage. In our corpus analysis and 'Accessible Cues' all recommendations will be normalised to British English spelling and grammar.

7. Bibliography

- APA, American Psychiatric Association. 2013. Diagnostic and statistical manual of mental disorders. 5th ed. Arlington: APA.
- Arfé, B., Mason, L. & Fajardo, I., 2018. Simplifying informational text structure for struggling readers. *Reading and Writing*, Issue 31 (1), pp. 2191-2210.
- Štajner, S., 2015. New data-driven approaches to text simplification unpublished PhD thesis. Available at: https://wlv.openrepository.com/bitstream/handle/2436/601113/Stajner PhD+thesis.pdf?sequence=1
- Bernabé Caro, R., 2020. New Taxonomy of Easy-to-Understand Access Services. : *Traducción y Accesibilidad en los medios de comunicación: de la teoría a la práctica.* s.l.:MonTl. Monografías de Traducción e Interpretación., pp. 345-380.
- Bernabé Caro, R. & Cavallo, P., 2021. Easy-to-Uderstand Access Services: Easy Subtitles.: M. Antona & C. Stephanidis, éds. *Universal Access in Human-Computer Interaction. Access to Media, Learning and Assistive Environments. HCII 2021. Lecture Notes in Computer Science.* Cham: Springer, pp. 241-254.
- Bernabé Caro, R. & Orero, P., 2019. Easy to Read as Multimode Accessibility Service. *Hermēneus Revista de traducción e interpretación*, 20 12, Issue 21, pp. 53-74.
- Bernabé Caro, R. & Orero, P., 2021. Easier audio description: exploring the potential of Easy-to-Read principles in simplifying AD. *Innovation in audio description research*. New York: Routledge, pp. 55-75.
- Bhatia, V. K., 1983. Simplification vs. Easification The case of Legal Texts. *Applied Linguistics,* Issue 4 (1), pp. 42-54.
- British Council, 2022. *Teaching English*. Available at: https://www.teachingenglish.org.uk/article/esol

- Change. 2016. How To Make Information Accessible. A guide to producing easy read documents. Available at :. https://www.changepeople.org/getmedia/923a639 9-c13f-418c-bb29- 051413f7e3a3/How-to-make-info-accessible-guide-2016-Final
- COGA, 2017. Cognitive and Learning Disabilities
 Accessibility Task Force on Cognitive Accessibility
 User
 Research.
 Available at: https://w3c.github.io/coga/user-research/
- Crossley, S. A., Allen, D. & McNamara, D. S., 2012. Text simplification and comprehensible input: A case for an intuitive approach. *Language Teaching Research*, 16(1), pp. 89-108.
- Disability Unit & Cabinet Office, 2021. Accessible communication formats.

 Available at: https://www.gov.uk/government/publications/inclusive-communication/accessible-communication-formats
- Dumas, A., 1997. *The Count of Monte Cristo*. Ware: Wordsworth Editions.
- European Commission, 2015. The European Accessibility Act.

 Available at: https://ec.europa.eu/social/main.jsp?catId=1202
- European Commission, 2021. Accessibility of ICT products and services.

 Available at: https://joinup.ec.europa.eu/collection/rolling-plan-ict-standardisation/accessibility-ict-products-and-services
- European Parliament, 2016. EU Directive 2016/2102. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L2102&fr om=EN
- Fajardo, I. et al., 2014. Easy-to-read Texts for Students with Intellectual Disability: Linguistic Factors Affecting Comprehension. *Journal of Applied Research in Intellectual Disabilities*, Volume 27, pp. 212-225.
- Government Digital Service (GDS). 2022. Style guide and guidance on content design. Available at: https://www.gov.uk/guidance/content-design/writing-for-gov-uk
- García Muñoz, Oscar,. 2012. *Lectura fácil: Métodos de redacción y evaluación*. Madrid: Plena Inclusión Madrid.
- Gibbs, A., 2020. Supporting Your Children's and Teens' Home Learning: Using Context Clues to Understand New Words, Iowa Reading Research Center.

Available at: https://iowareadingresearch.org/blog/supportinghome-learning-context-clues

- Greco, G. M., 2016. On Accessibility as a Human Right, with an Application to Media Accessibility. : P. O. Anna Matamala, éd. Researching Audio Description. New Approaches.. s.l.:Palgrave, pp.
- Halliday, M. A. K., 2008. Complementarities in language. Beijing: The Commercial Press.
- Hansen-Schirra, S. & Maaß, C., 2020a. Easy Language Research: Text and User Perspectives. Berlin: Frank&Timme.
- Hansen-Schirra, S. & Maaß, C., 2020b. Easy Language, Plain Language, Easy Language Plus: Perspectives on Comprehensibility Stigmatisation.. : H. Silvia & C. Maaß, éds. Easy Language Research: Text and User Perspectives. Berlin: Frank&Timme.
- Hawthorne, K. & Loveall, S. J., 2020. Interpretation of ambiguous pronouns in adults with inellectual disabilities. Journal of Intellectual Disability Research, 65(2), pp. 125-132.
- IFLA, 2010. Guidelines for Easy-to-Read Materials. https://www.ifla.org/wp-Available at: content/uploads/2019/05/assets/hg/publications/pr ofessional-report/120.pdf
- Inclusion Europe. 2010. Information for all European Standards for making information easy to read and undersand. Available at: https://www.inclusioneurope.eu/wpcontent/uploads/2017/06/EN Information for all. pdf.
- ILSMH European Association. (1998). Make it Simple: European Guidelines for the Production of Easyto- Read Information for People with Learning Available Disability. https://docplayer.net/142050357-llsmh-europeanassociation-make-it-simple-european-guidelinesthe-production-of-easy-to-read-informationfor-people-with-learning-disability.html
- I.S. EN17161. 2019. CEN/CLC/JTC 12- 'Design for All'. Available https://universaldesign.ie/products-services/i-sen-17161-2019-design-for-all-accessibilityfollowing-a- design-for-all-approach-in-productsgoods-and-services-extending-the-range-ofusers/
- Jordanova, V., Evans, R. & Cerga Pashoja, A., 2014. D7.2: Benchmark report (results of piloting task), Bruxelles: European Commission.
- Kintsch, W. & Van Dijk, T. A., 1978. Toward a model of text comprehension and production.. Psychological Review, Volume 85, pp. 363-394.
- Kusumarasdyati, A. A., 2001. Semantic and Syntactic Clues as Vocabulary Strategies in Reading Comprehension. FSU in the Limelight, 8(1).
- Lindholm, C., & Vanhatalo, U., 2021. Handbook of Easy Languages in Europe. Berlkn: Frank&Timme 80

- Maaß, C., 2020. Easy Language Plain Language -Easy Language Plus. Balancing Comprehensibility and Acceptability. Berlin: Frank&Timme.
- Maaß, C. & Hernández Garrido, S., 2020. Easy and Plain Language in Audiovisual Translation. : C. Maaß & S. Hansen-Schirra, éds. Easy Language Research: Text and User Perspectives. Berlin: Frank&Timme, pp. 131-161.
- Mazur, B., 2000. Revisiting Plain Language. Technical Communication, 47(2), pp. 205-211.
- McGee, J., 2010. Toolkit For Making Written Material Clear And Effective. U.S. Department of Health and Human Services Centers for Medicare and Medicaid Services. Available https://emilylinginfelter.com/writing-tips/toolkit-formaking-written-material-clear-and-effective/
- McNamara, D. S., Louwerse, M. M., McCarthy, P. M. & Graesser, A. C., 2010. Coh-Metrix: capturing linguistic features of cohesion. *Processes*, Volume 47, p. 292–330. Discourse
- Meisel, J., 1980. Linguistic simplification. : S. Felix, éd. Second Language: Trends and Issues. Tubingen: Gunter Narr, p. 13-140.
- Mencap. 2000. Am I making myself clear? Mencap's guidelines for accessible writing. Available at: http://funding4sport.co.uk/downloads/guidelines for accessible writing.pdf
- Morton Gernsbacher, A. & Pripas-Kapit, R. S., 2012. Who's Missing the Point? A Commentary on Claims that Autistic Persons Have a Specific Deficit in Figurative Language Comprehension. *Metaphor* and Symbol, 27(1), pp. 93-105.
- Nash, H. & Snowling, M., 2006. Teaching new words to children with poor existing vocabulary knowledge: A controlled evaluation of the definition and context methods. International Journal of Language & Communication Disorders, Volume 41, p. 335-354.
- Oakhill, J. & Yuill, N., 1986. Pronoun resoluion in skilled and less skilled comprehenders: Effects of memory load and inferential complexity.. Langauge and Speech, 29(1), pp. 25-37.
- ODI. 2010. The Plain Langauge Act. Available at: https://www.dni.gov/index.php/plainlanguageact#:~:text=The%20Plain%20Writing%20Act%20o f,and%20collaboration"%20in%20his%20Jan.
- Perego, E., 2020. Accessible Communication: A Cross-country Journey. Berlin: Frank&Timme.
- Perego, E. & Blaž, Z., 2018-2021. EASIT project, Unit 3B: E2U and Audio Description. Available https://transmediacatalonia.uab.cat/easit/unit-3b/

- PLAIN. 2011a. Federal Plain Language Guidelines. Available https://www.plainlanguage.gov/guidelines/
- PLAIN. 2011b. Plain Language: Use simple words phrases. Available https://www.plainlanguage.gov/guidelines/words/use -simple-words-phrases/.
- Reed, D. K., Petscher, Y. & Truckenmiller, A. J., 2017. The contribution of general reading ability to science achievement. Reading Research Quarterly, Volume 52, pp. 253-266.
- Robinson, H. A., 1975. Teaching Reading and Study Strategies: The Content Areas. Boston: Allyn and Bacon.
- Saggion, H., 2018. Text Simplification. : R. Mitkov, éd. The Oxford Handbook of Computational Linguistics 2nd edition. Oxford: Oxford University Press.
- Saggion, H. et al., 2011. Text Simplification in Simplext: Making Texts more Accessible. Procesamiento del Lenguaje Natural, 09, Issue 47, pp. 341-342.
- Scope Australia. 2015. Clear Written Communications. The Easy English Style Guide. at: https://www.rch.org.au/uploadedFiles/Main/Conte nt/ethics/Clear-Written-Communications.-Easy-English-Style-Guide.pdf
- Tavares, G. et al., 2015. Who do you refer to? How young students with mild intellectual disabilities confront anaphoric ambiguities in texts and sentences. Reserach in Developmental Disabilities, Volume 38, pp. 108-124.
- UNCRPD, 2006. United Nations, Convention on the Persons Disabilities. Rights of with Available https://www.un.org/development/desa/disabilities/c onvention-on-the-rights-of-persons-withdisabilities.html
- WCAG 2.1, 2019. The Web Content Accessibility Guidelines. Available at: https://www.w3.org/WAI/WCAG21/quickref/

Yaneva, V., 2016. Assessing text and web accessibility for people with autism spectrum disorder unpublished Thesis. Available at: https://wlv.openrepository.com/handle/2436/62039

8. Language Resource References

- Onestopenglish, 2007. News lessons. Macmillan English Campus. Available at: http://www.onestopenglish.com
- Orasan, C., Evans, R.J., & Mitkov, R. (2018). Intelligent Text Processing to Help Readers with Autism. Intelligent Natural Language Processing: Trends and Applications, Springer.

9. Appendix

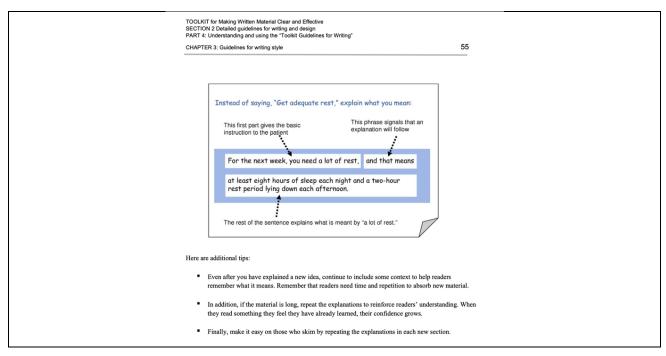


Figure A: Example of simplification strategies: using definition and reiteration in healthcare materials (McGee, 2010)

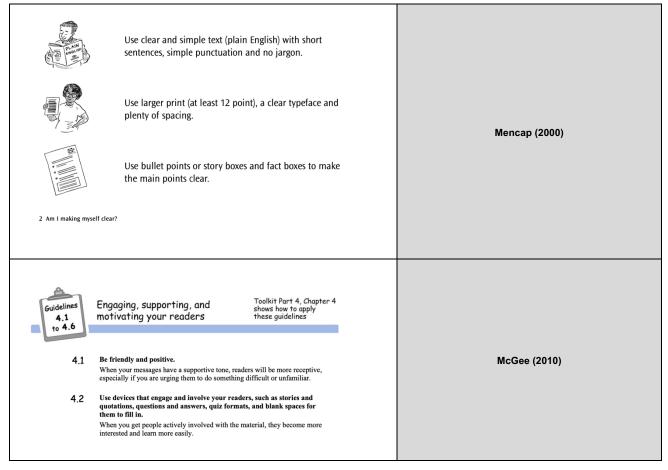


Figure B: Examples of easification strategies extracted from Mencap (2000) and McGee (2010)

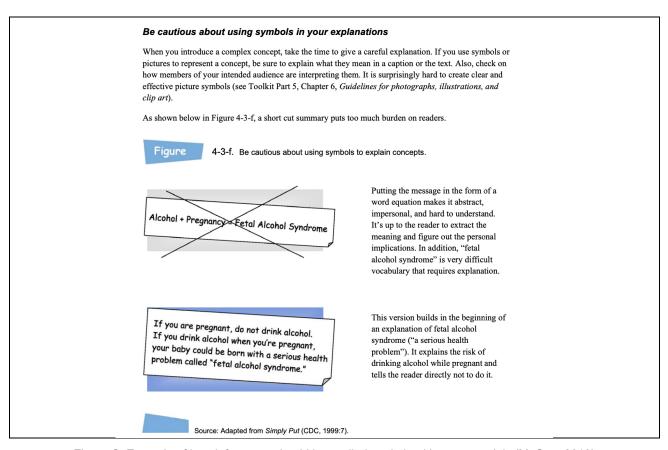


Figure C: Example of how inferences should be spelled out in healthcare materials (McGee, 2010)

| Source | Domain & txt type | End-users | Validation status | Guidance on validation |
|------------------|---|---|--|--|
| Mencap (2000) | for service providers (local councils, Government departments, charities, hotels and restaurants, shops, leisure facilities, accountants, solicitors, churches, courts, hospitals and clinics) | people with learning disability | Guidelines have been validated | Seek advice from supporters and professionals who are familiar with client's needs. Focus groups with people with learning disability to provide feedback |
| McGee (2010) | questionnaires and forms | culturally diverse audiences, less skilled readers, elderly with age- related declines in vision, ability to read and process written info, regardless of literacy level | Guidelines have been validated | Validate with end users: usability testing by piloting material beforehand through interviews, questionnaires or forms. Look for feedbacks and work in teams. |
| PLAIN (2011) | regulations, law, administration | any audience | Unclear | involvement a priori and through iteration (while work is in progress) and retest after making changes of specific end-users |
| GDS (2022) | writing on the web (legal, administrative, GOV) | general audience (more than one user group – including specialists) living in the UK. Also mentions people with moderate learning disabilities | Guidance validated through style guides user testing | Check feedback left on GOV.UK or helplines and the proportion of users who found the page useful. |
| | interested persons). For government, commerce, voluntary, service and media sectors. Formats: printed, audio | those with limited skills in reading, writing and understanding: learning disabilities, disabilities, limited formal education, social problems, immigrants. These guidelines focus on learning disabilities. | Unclear | Consult people with learning disability during production process (from selection of relevant topics to writing the text and final layout of publication). When providing draft, allow enough time for reading, and clarify if they don't understand the contents, highlight confusing words or phrases and possible extra questions and information needed |
| Europe | written information, websites, video with subs, AD or audio information (news, announcements). Not applicable to poetry or stories only general advice. Especially for lifelong learning programmes. | adults with ID, reading difficulties, L2, blind people with ID | never been tested | Involve people with ID in decision-making processes (about the subject, what to say on the subject, about where to make info available). Only validate target text not source text. Validate end-result with users. |
| IFLA (2010) | printed/electronic/audio/video editorial content: literature (fiction & non-fiction, original and adaptations); news; magazines; informational content (governmental or commercial, including on the web) For publishers. | school-children). 2 groups: 1) people with ADHD, autism, Asperger & Tourette syndrome; ID; learning/reading difficulties (dyslexia & others); prelingually deaf, deafblind, aphasia, dementia 2) recent migrants, non-natives, children (<grade (education,="" 4,="" 9="" approx.="" functional="" illiterates="" illness).<="" issues,="" mental="" o),="" social="" td="" y=""><td>never been tested</td><td>Test the material before it goes to press with target groups</td></grade> | never been tested | Test the material before it goes to press with target groups |
| ODI (2010) | (NHS & health related) to | Aimed at learning disabilities but also useful for BSL, English as L2, black and ethnic minorities | Unclear | Validate with end users to find how to make info accessible and useful. Do not use jargon when "consulta ting". During consultations adapt questions for audience. Read draft aloud. Use focus groups, scenarios and roleplays or questionnaires (if to be filled with handwriting, allow for big space). Involve end users from the start, provide information through different channels and formats, ensure info meets users' needs, signpost to other services, define responsibility for information provision and identify barriers. |

| Scope (2015) | Websites, documents for websites, power point presentations. | | Unclear | validate with end users in groups or individually (consumer testing). Direct feedback to determine readability and usability of written material. Assist those that cannot read txt by themselves. Elicit feedback on: general layout and presentation of the information, is the language clear and easy to understand, images used make sense and support language, overall ease of use and readability |
|------------------|---|---|---------|--|
| Change (2016) | their information accessible to provide clear instructions, facts | learning disabilities, people that struggle with reading and writing (non-readers, low literacy skills, sensory disabilities), people with English L2 | Unclear | involve people with learning disabilities ad priori, to understand what information they want. Use local advocacy groups, organisations run by disabled people. Face-to-face in steering groups, workshops, small focus groups. Provide background information so they can make informed comments. Get feedback on the final draft of your document. It is important to consider the feedback and make any necessary amendments before distributing. |

Table A: Overview of main characteristics of the analysed guidelines

| Source | Conversational style | Attention to register and grammar | Declare purpose | Declare target audience | Age appropriate | Culturally appropriate | Accurate information | Credible information | Relevance |
|-------------------------------|----------------------|-----------------------------------|--------------------|-------------------------------|--------------------|------------------------|----------------------|----------------------|--------------|
| Mencap (2000) | √ | | | | V | | | | \checkmark |
| McGee (2010) | √ | | ~ | √ | V | √ | \checkmark | √ | √ |
| PLAIN (2011a) | √ | | V | V | | | V | | |
| GDS (2022) | V | V | | | | | √ | | √ |
| ILSMH (1998) | √ | | | | √ | | | | √ |
| Inclusion Europe (2010) | V | | ~ | V | V | | | | |
| IFLA (2010) | | | | | V | | | | √ |
| ODI (2010) | | Х | | | √ | | | | √ |
| Scope (2015) | √ | V | √ | | √ | √ | | | √ |
| Change (2016) | V | Х | | | V | | V | V | V |

Table B: Overview of macro strategies suggested, rejected or not mentioned in the analysed guidelines

| Linking words | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|
| Pointing words | Echo links | Connectives | | | | | | |
| That, the, these, this those | Words or phrases that repeat previously mentioned ideas | Transitions (also, further, therefore) Adding a point (also, and, besides, further, in addition, similarly, what is more) Examples (for another thing, for example, for instance, for one thing) Restating (again, in other words, in short, put differently, that is) Results (accordingly, as a result, so, then, therefore, thus, when) Contrasting (but, conversely, however, nevertheless, on the other hand, still) Summing up (to conclude, in conclusion, in short, to summarise, to sum up) Sequencing ideas (finally, first, secondly, thirdly) | | | | | | |

Table C: Linking words to be used according to PLAIN (2011a)

| Source | Generic | Narrative-related | Space | Time | Terms | Inferences |
|------------------|--|-------------------|--|--|--|------------|
| Mencap (2000) | | | | | | |
| McGee (2010) | | | | | After explaining a new idea, continue to include some context to help readers remember meaning. Reiterate terms by providing additional context as you move on. Use context to help understand abstract terms like "excessive bleeding", "regular exercise", "a variety of", by introducing "that means" or "if" and "when" clauses. | |
| PLAIN (2011a) | Present information in context without expecting background knowledge. | | | Present information in a chronological order. | | |
| GDS (2022) | | | Write the full name of the area the first time you use it. Use a capital for a shortened version of a specific area or region if it's commonly known by that name. | and pm: 5:30 PM; 10am to 11am; midnight, midday (not | that users can easily see if they've found | |

| | Don't assume | | Pictures of places to | For dates use "a long | fastest possible way. Content also needs to be in context. Contextualizing terms improves literacy. | |
|-------------------------------|---|---|---|--|---|--|
| ILSMH (1998) | previous knowledge. | | help locate rather than address or name of place | time ago" and similar. | | |
| Inclusion Europe (2010) | Provide context related to people or places. | Present the background voice before they start to speak. | Explain where new place is if place of filming changes. Explain each place in new scene. It can also be easier to see people going from one place to another rather than seeing someone here and then suddenly elsewhere without knowing why. | Present information in a chronological order. | | |
| IFLA (2010) | Remove any additional details that audiences can't relate to. Provide background explanations of context. | Keep frames of reference into account. Action should be direct and simple without a long introduction and involvement of too many characters. Remove irrelevant characters. Remove plot irrelevant or obvious information Avoid lengthy aesthetic descriptions. Remove digressions. There is no need to use markers to introduce dialogues. | Write the name of the area and give context (Marseille, in the south of France). Remove any additional detail that audiences can't | | | Explain complicated relationships in a concrete and logical manner. Place facts in a specific context and provide background explanations to account for readers' frames of reference in terms of different cultural, religious or educational background. |
| ODI (2010) | | | | Avoid the 24-hour clock. Use am & pm. Pictures using analogue or digital clocks can help explain time. | Provide explanation of technical terms in context. | |
| Scope (2015) | | | | Be specific with dates, show a 12- hour clock image and a digital clock. Present events in a chronological order. | | |
| Change (2016) | Avoid detailed background information and detailed explanations. | | | | No subtle variations on the same theme. | Avoid multiple points of view, debates, discussions or variation on the same theme. |

Table D: Overview of Contextualization strategies suggested by the analysed guidelines

| Original version | Easy-to-read version |
|---|--|
| Marseille – Arrival | In Marseilles |
| On February 24, 1815, the lookout at Notre-Dame de la Garde signalled the arrival of the three-master <i>Pharaon</i> , coming from Smyrna, Trieste and Naples. As usual, a coastal pilot immediately left the port, sailed hard by the Château d'if, and boarded the ship between the Cap de Morgiou and the island of Riou. At once (as was also customary) the terrace of Fort Saint-Jean was thronged with onlookers, because the arrival of a ship is always a great event i Marseille, particularly when the vessel, like the <i>Pharaon</i> , has been built, fitted out and laded in the shipyards of the old port and belongs to an owner from the town. Meanwhile the ship was drawing near, and had successfully negotiated the narrows created by some volcanic upheaval between the islands of Calasareigne and Jarre; it had rounded Pomègue and was proceeding under its three topsails, its outer jib and its spanker, but so slowly and with such melancholy progress that the bystanders, instinctively sensing some misfortune, wondered what accident could have occured on board. Nevertheless, those who were experts in nautical matters acknowledged that, if there had been such an accident, it could not have affected the vessel itself, for its progress gave every indication of a ship under perfect control: the anchor was ready to drop and the bowsprit shrouds loosed. Next to the pilot, who was preparing to guide the <i>Pharaon</i> through the narrow entrance to the port of Marseille, stood a young man, alert and sharp-eyed, supervising every movement of ship and repeating each of the pilot's commands. One of the spectators on the terrace of Fort Saint-Jean had been particularly affected by the vague sense of unease that hovered among them, so much so that he could not wait for the vessel to come to land; he leapt into a small boat and ordered it to be rowed out to the <i>Pharaon</i> , coming alongside opposite the cove of La Réserve. When he saw the man approaching, the young sailor left his place beside the pilot and, hat in hand, came and leant on the bulwarks of th | On 24 February 1815 a French ship came sailing into the port of Marseilles in south of France. The name of the ship was Pharaon. Beside the pilot, who was to guide the ship into the harbour, stood a young sailor, leaning against the railing. He was at most twenty years old. He was tall and slim, he had beautiful dark eyes and his hair was black. He looked strong and steady. His name was Edmond Dantés. The young man stood and watched a small rowing boat which was hurrying towards the Pharaon. A man in the rowing boat waved eagerly to him. "Oh, it's you, Edmond Dantés" he called. "Why do you look so sad, my young friend?" "We have suffered a great misfortune, Mr. Morrel", answered the young man. "We have lost our captain!" |

Table E: Standard and adapted version (IFLA, 2010) of an excerpt from *The Count of Monte Cristo* (Dumas, 1997)

| Source | Familiar words | Consistency | Slang | Regional words | Short words | Foreign words | Explicitate numbers with words | Abbreviations | Acronyms | Abstract words | Jargon | Technical terms |
|-------------------------------|-------------------|-------------|-------|-------------------|----------------|------------------|--------------------------------|---------------|----------|----------------|--------|--------------------|
| Mencap (2000) | V | V | | | | | V | X | | х | x | x |
| McGee (2010) | V | | Х | х | √ | | V | х | × | √ | х | х |
| PLAIN (2011a) | V | V | | | V | Х | | × | Х | Х | Х | Х |
| GDS (2022) | V | | | | V | | × | V | √ | | X | ~ |
| ILSMH (1998) | V | V | | | | Х | V | Х | х | Х | Х | х |
| Inclusion Europe (2010) | V | 7 | | | | Х | × | х | x | | | |
| IFLA (2010) | | Х | | | V | | | Х | | Х | | х |
| ODI (2010) | V | x | | | V | | Х | х | х | | x | × |
| Scope (2015) | 1 | V | Х | | √ | | х | х | х | | Х | 1 |
| Change (2016) | V | ٧ | | | V | | х | Х | х | V | Х | Х |

Table F: Lexical recommendations – generic and noun-related

| Source | Questions | Figures of speech | Personal pronouns as referents | Conversational pronouns | Noun strings | Adverbs | Compound adjectives |
|-------------------------------|-----------|-------------------|--------------------------------------|-------------------------|--------------|----------|---------------------|
| Mencap (2000) | | | | √ | | | |
| McGee (2010) | | х | Х | V | | | |
| PLAIN (2011a) | ٧ | Х | ٧ | V | Х | V | |
| GDS (2022) | X | Х | | √ | | | |
| ILSMH (1998) | | √ | | √ | | | |
| Inclusion Europe (2010) | | Х | V | V | | | |
| IFLA (2010) | | V | V | | | X | Х |
| ODI (2010) | Х | V | | | | | |
| Scope (2015) | | х | Х | V | | | |
| Change (2016) | | | | V | | | |

Table G: Lexical recommendations – noun-related, referents, adverbs and adjectives

| Source | Present | Past | Future | Conditional | Progressive and compound tenses | D ! | Contractions | Modal verbs | Negation | Hidden verbs |
|-------------------------------|----------|----------|--------|-------------|--|-----|--------------|-------------|----------|-----------------|
| Mencap (2000) | | | | | | X | | | | |
| McGee (2010) | | | | | | X | √ | Х | | |
| PLAIN (2011a) | √ | | х | х | | Х | V | √ | Х | Х |
| GDS (2022) | | | | | | Х | V | √ | √ | |
| ILSMH (1998) | | | Х | | | Х | | Х | Х | |
| Inclusion Europe (2010) | √ | Х | | | | х | х | | Х | |
| IFLA (2010) | √ | V | | х | √ | | √ | | | |
| ODI (2010) | | | | | | х | √ | | | |
| Scope (2015) | | | | | | х | х | | | |
| Change (2016) | | | | | | | х | | V | |

Table H: Lexical recommendations – verbs

| Inclusion Europe quidelines | Inclusion Europe examples |
|--|--|
| Use positive sentences rather than negative ones where possible. For example, say "You should stay until the end of the meeting" rather than "You should not leave before the end of the meeting". | Always use the right language for the people your information is for. For example, do not use language for children when your information is for adults. Do not use difficult ideas such as metaphors. A metaphor is a sentence that does not actually mean what it says. Make sure it is always clear who or what the pronoun is talking about. If it is not clear then use the proper name instead. |
| Avoid all abbreviations like "e.g." or "etc." | Instead, write My son's name is Michael. Yesterday, I bought a new bike for him. The new bike is green and yellow. |
| Where possible, use the present tense rather than the past tense. | We did not have the time to check if the standards to make stories or poetry easy to read and understand would be the same or slightly different. We have made these standards as part of a project that took place in Europe. People from 8 European countries met several times to write these standards. The project which brought these people together was called "Pathways to adult education for people with intellectual disabilities". |
| Use active language rather than passive language where possible. For example, say "The doctor will send you a letter" not "you will be sent a letter". | We have made these standards as part of a project that took place in Europe. People from 8 European countries met several times to write these standards. The project which brought these people together was called "Pathways to adult education for people with intellectual disabilities". |

Table I: Example of incoherence in Inclusion Europe (2010) regarding negations, contractions, past tense and passives 91

| Source | Hyphenation to split words | Sentence length | Order | Topicalization | Periods |
|-------------------------------|----------------------------|---|--|---|---|
| Mencap (2000) | No | Short sentences. | | | Simple punctuation (no semicolon and colon). Break sentences with commas or and. No too many commas to break up a sentence. |
| McGee (2010) | No | Short sentences. Vary sentence length: 8-15 words per sentence. | | | Simple sentences or use simple conjunctions (<i>or</i> , <i>but</i> , <i>and</i>). Limit number of explanatory and qualifying clauses. |
| PLAIN (2011a) | | Short sentences | Prefer SVO order. SVO followed by modifiers, phrases or clauses. | · | Avoid wordy and dense constructions. Use lots of full stops. Avoid dependent clauses and exceptions. If for conditions, when to introduce other clauses after if. Complex phrases can be put into tables. |
| GDS (2022) | | Short sentences: max. 25 words. Otherwise, split. For moderate learning disabilities best 5-8 words. | Marked order (front-load sentences) to emphasise words. | | Don't use semicolon. Long sentences with semicolon should be broen. |
| ILSMH (1998) | No | Short sentences. One line per sentence. Otherwise split into separate lines at natural speech break. | | new page. | Simple punctuation (no commas, semicolon, hyphens). Break sentences at natural speech break. Avoid complex structures. |
| Inclusion Europe (2010) | No | Short sentences. | | One idea per sentence. Use full stop before starting a new idea. One idea per line. New sentence on a new line. | Simple punctuation (no comma or <i>and</i>). |
| IFLA (2010) | | Prefer one line per sentence. | | single sentence. | Break sentences at a natural speech break. Avoid subordinate clauses and express them with single sentences, and, clauses with commas and relative clauses. |
| ODI (2010) | No | Sentences as short as possible. Max 15 words per sentence. 10 to 15 preferable. | Can be marked. | verb. | No difficult punctuation (no colon). Use full stops. Use commas in lists of items. Sentences can end with prepositions or start with and or but. |
| Scope (2015) | | Short sentences. Use 25-30 characters per line if paired with images. If not, no more than 50-60 characters per line. | | split words, complete | Simple punctuation. No brackets, hyphens, &, slashes. Prefer simple sentences. |
| Change (2016) | No | Short sentences. | | Key statements or key information per sentence. Identify keywords. One idea per sentence. | Single sentences. |

Table J: Syntactic recommendations